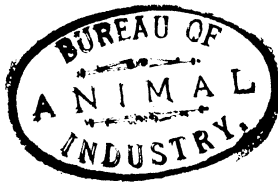


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CIRCLAR No. 11.

(DAIRY No. 3.)

United States Department of Agriculture,

BUREAU OF ANIMAL INDUSTRY.



HOW TO SELECT GOOD CHEESE.

In many parts of the country there have been increasing complaints during the past year as to the inferior quality of the general supplies of cheese in the markets. Merchants and consumers have found it difficult to get a grade of cheese to suit their wants. In very many cases jobbers and retailers have purchased cheese from houses of established reputation, under written guarantees as to make and quality, which has proved so poor as to be unsalable, causing serious losses to the holders and discouragement or disgust on the part of consumers. As a result an impression prevails to some extent that good cheese is no longer made in quantity in the United States. This is undoubtedly erroneous and can be easily explained. This paper will also endeavor to briefly describe how those who will take proper precautions in selection and purchase can be almost certain to provide themselves with good cheese.

WHY POOR CHEESE HAS APPEARED IN THE MARKETS.

There are several causes for the appearance of so much poor cheese in the markets in different sections of the country. First, makers and dealers have tried to meet a somewhat extended popular demand for a fresh and mild-flavored cheese by hurrying stock through the curing rooms and distributing a large quantity which was immature or poorly ripened. However good the materials of which such cheese was made its merits were destroyed by undue haste in making sales. Second, there was an unusual stock of cheese "off flavor" and of second grade, or lower, during the year 1895. The marked decrease in cheese exports from this country had caused a surplus during the winter of 1894-95, which came out of cold storage during the spring and summer much impaired in quality. To this was added the usual supply of skimmed and partly skimmed cheese, which always endeavors to find a place by underselling better goods. The result was a large accumulation of inferior cheese, which speculators and peddlers bought at their own price and succeeded in scattering, especially through the Southern and Western States, by reason of the very low rates at which it was sold. Third, the improvements made in the manufacture and consequent appearance of "filled" cheese has enabled those who have been willing to act as its distributing agents to practice deceit and fraud more successfully than ever, by forcing this imitation onto innocent buyers. It has been most unscrupulously branded in all sorts of ways, with the

purpose of deceiving, and large dealers who have heretofore borne a good reputation have offered these fraudulent goods and guaranteed them in most positive terms to be full-cream cheese. Many merchants unaccustomed to making a critical examination of the cheese handled by them, but who have depended for years upon the honesty of those from whom they ordered supplies, have been thus grossly deceived. In this way "filled," or neutral lard, cheese has found its way into nearly every State which has not strict laws on the subject of imitation and adulterated dairy products. Even in States having good laws this cheese has obtained a foothold in trade, unless the agencies for enforcing such regulations proved vigilant and efficient.

COMPOSITION OF "FILLED" CHEESE.

It may be well to state in passing that "filled" cheese differs from the genuine, old-fashioned article in but one essential particular, so far as its composition is concerned. Instead of the natural fat of milk, or cream, which is extracted for butter-making, there is substituted what is known as "neutral lard," made from the leaf fat of the hog. This article, claimed to be exceptionally pure and good of its kind, is used at the rate of two or three pounds to every 100 pounds of skim-milk. The cheese resulting carries about 30 per cent of (lard) fat, which is rather less than the average of (butter) fat in good whole-milk cheese. The casein and other components of the two are practically the same in kind and proportions. From this statement of composition one can judge for himself whether this filled, or lard, cheese is a legitimate article of food, whether it is "wholesome," and whether he desires to use it in the diet of himself and family. It is made of comparatively cheap materials, costing from one-half to two-thirds as much as good, full-cream, factory cheese, and its market price, wholesale or retail, should correspond. At its best, this is a cheap, inferior article of cheese; it is almost devoid of flavor, oily or greasy when warm, and never attains the dry, crumbly consistency of a well-cured cheese. It is sold when only a month or two from the press, in imitation of mild, immature cheese. It is claimed that it does not keep well, especially if subjected to temperature above 60°. No one acquainted with first-class full-cream cheese would ever accept the filled product as a substitute, but it may be successfully passed as a genuine article of second grade.

ABUNDANCE OF GOOD CHEESE IN THE MARKETS.

There is plenty of good cheese still made in the United States, and it can be secured if buyers will but make a little effort to find it. The States of New York and Wisconsin together produce two-thirds of all the cheese made in the country, and the reputation of the factories of these States for high quality, full-cream cheese has been long established. The product of these factories of the standard, or Cheddar, form of large cheese stands second to none in the markets of Great Britain as well as in America.

The two States named, as well as others, absolutely prohibit the manufacture and sale of filled cheese within their borders and the marking of skim cheese to imitate full-cream goods. These laws are well enforced. Several States especially provide by law that distinctive brands may be placed upon the bandages of full-cream cheese made in their factories, and also upon the boxes in which the cheese goes to

market. These official brands are numbered and registered and, so far as known, have never been actually counterfeited, although some have been closely imitated. Strangely enough, many factory managers fail to avail themselves of these laws which permit them to identify and guard their products. Their cheese is sold unmarked, to dealers who prefer to place upon it their own brands or trade-marks. The factories thus lose the advantages conferred by law and permit "the near-by dime to hide the more distant dollar" in their business.

When cheese and package are found branded in accordance with the stated provisions of law, the article may safely be accepted as genuine and guaranteed. Others just as good may be on the market unbranded, or without the State brand, but such can not be bought with equal confidence. Manufacturers who do use the official brands for the identification and guarantee of their products are entitled to all benefits resulting from such action.

ADVICE TO BUYERS OF CHEESE.

With this explanation, the following advice may safely be offered to buyers of cheese. It must be understood that these remarks apply only to cheese of the customary factory form, weighing from twenty to sixty pounds each, and sold and shipped in round boxes, one or two cheeses in a box. This description covers the great bulk of the cheese of commerce in the United States, but necessarily excludes a large number of other kinds and fancy forms of cheese, more or less familiar to trade but all in comparatively insignificant quantity and less subject to imitation and adulteration.

Merchants buying cheese should deal with agents and firms whom they consider thoroughly reliable and from whom redress can be obtained in case of deception and loss, even if unintentional. They should become familiar with the authorized or official markings for full-cream cheese made in the principal producing States and should specifically order only such cheese as is so marked. Upon arrival, every cheese should be examined and none accepted which can not be definitely identified by its markings as the article ordered and desired.

Retail dealers should take the same precautions and should either keep cheese in the boxes in which bought, or preserve the boxes until the cheese is all sold. Every cheese should be so cut, for retail, as to keep the mark on the bandage, to insure identity, until the last piece is sold.

Consumers should inform themselves as to proper markings in like manner and, when they buy, should insist upon seeing the markings upon the cheese and, if necessary, upon its box, in order to fully identify the article as one officially branded.

These simple directions, if followed, will make it reasonably certain that the buyer secures a full-cream factory-made cheese, guaranteed under the laws of the State indicated by its brand. While it will be thus possible to obtain cheese made from whole-milk, pure and undulterated, it is not possible in any way to guarantee skill in making, age, and proper ripening to develop the special flavor desired. Flavors differ and tastes differ. In these respects "the proof of the pudding is in the eating."

Those who desire to obtain skim-cheese, or partly skimmed, or filled cheese, can get these articles by specially inquiring for them, and at

prices to correspond to the quality of the article, being always considerably below the current prices for the State brands of full-cream cheese. Several States provide by law that these lower grades shall be so branded on cheese, or box, or both, as to show exactly what they are; but these laws are so diverse as to prevent concisely describing them.

STATES AUTHORIZING SPECIAL MARKS FOR CHEESE.

For the information of all interested, statements follow as to the laws authorizing special marks for cheese, already referred to, in the States of New York, Wisconsin, Ohio, Minnesota, and Colorado, together with *facsimiles* of the official brands in use. These statements have been submitted to the Dairy Commissioners and officers of the Dairy Associations of the States named, respectively, and by them examined and approved as correct. The stencil brands have been furnished by the courtesy of the same officials. No other States, so far as known, have laws of like character.

Merchants and consumers can do much towards increasing the efficiency of these laws intended to guard the purity of food products if they will report any case coming to their knowledge where it is believed that brands have been counterfeited or improperly used. Such report should be made to the State Dairy and Food Commissioner of the State in which the article purports to be made, at the capital of the State, and to the U. S. Department of Agriculture (Dairy Division) at Washington, and should exactly describe the marks on the cheese and its box, and state the name and address of the person or firm from whom it was purchased and the date of purchase.

HENRY E. ^{Eliah}ALVORD,
Chief of the Dairy Division.

Approved:

J. STERLING MORTON,
Secretary.

WASHINGTON, D. C., *April 20, 1896.*

NEW YORK.

Makers of full cream cheese in the State of New York are authorized to identify their products and protect them from imitation, by the use of official, registered brands, as provided in section 33 of article 11 of the Agricultural Law, or chapter 33 of the General Laws, as approved April 10, 1893. That is as follows:

SEC. 33. Every manufacturer of "full milk cheese" may put a brand upon each cheese, indicating "full milk cheese," and the date of the month and year when made, and no person shall use such a brand upon any cheese made from milk from which any of the cream has been taken. The Commissioner of Agriculture shall procure and issue to the cheese manufacturers of the State, on proper application therefor, and under such regulations as to the custody and use thereof as he may prescribe, a uniform stencil brand, bearing a suitable device or motto and the words "New York State full cream cheese." Every such brand shall be used upon the outside of the cheese and upon the package containing the same, and shall bear a different number for each separate factory. * * * No such brand shall be used upon any other than full cream cheese or package containing the same.

Other sections of the same article prohibit the manufacture and sale of imitation and adulterated cheese, make legal the manufacture of pure, unadulterated skim-milk cheese (without official brands), prohibit false brands and labels, authorize the adoption and use of county trademarks to be registered, and prescribe penalties for the violation of all these provisions.

Makers of New York State full-cream cheese do not as generally avail themselves of these provisions of law as they should do for their own interests and those of retail dealers and consumers.

The date of manufacture is seldom branded upon cheese or box. When the official State brand is used, it is sometimes omitted from the cheese when put on the box. And quite frequently New York full-cream cheese does not bear an official brand at all.

There is much skim cheese (or "part-skims") and filled cheese to be found in different parts of the country bearing misleading and false brands, like "New York Full-Cream," etc., but the official State brand, with its registration number, has never yet been found actually counterfeited or very closely imitated.



(Two-thirds actual size.)

OHIO.

Manufacturers of full-cream cheese in the State of Ohio are authorized to identify their products and protect them from imitation by the use of an official and registered brand "bearing a suitable device or motto, and the words 'Ohio State full cream cheese,'" under Sec. 8 of an Act passed March 3, 1896, the provisions of which are almost identical with those of the New York law.

The brand is to be used upon the outside of the cheese and also upon the package. Every factory is to have a registered number.

The same law prohibits the use of the official brand upon any cheese other than full cream and the sale of falsely branded cheese. Other sections permit the manufacture and sale of imitation cheese or substitute for cheese in Ohio, if distinctly branded or marked "filled cheese," and provide for stamping "skimmed cheese" in a similar way.

Makers of Ohio full-cream cheese do not as generally avail themselves of these provisions of law as they should do for their own interests and those of retail dealers and consumers. Many packages of this cheese reach the market without branding aside from the simplest shipping mark. And when the official brand is used upon the box it is often omitted from the cheese.

There is a much skimmed or partly skimmed cheese and filled cheese to be found in different parts of the country bearing misleading and false brands, like "Ohio State Full-cream Cheese" and "Ohio Factory Full-cream," etc., but the official State brand of Ohio, with its registration number, has never yet been found actually counterfeited.



(Two-thirds actual size.)

WISCONSIN.

Manufacturers of full-cream cheese in the State of Wisconsin are authorized to identify their products and protect them from imitation by the use of an official brand duly registered. This brand is to be provided upon application by the State Dairy and Food Commissioner and used under regulations prescribed by that officer, and it is to be a "uniform stencil or brand, bearing a suitable device or motto and the words 'Wisconsin full-cream cheese.'" This, according to section 2, chapter 228, laws of 1893.

The same law provides that "every brand issued shall be used upon the side of the cheese on the bandage thereof, also upon the package containing the same;" that every separate factory shall have its number, duly registered; that it shall be unlawful to use the official brand upon other than full-cream cheese, and that "no person shall offer for sale, sell, ship, or consign cheese labeled with a false brand as to the quality of the article." Penalties are provided for violation of the law.

The manufacture and sale of filled cheese is absolutely prohibited in Wisconsin by Section 1 of Chapter 30, of the laws of 1895. Section 2 of the same act provides that "skimmed-cheese, or cheese manufactured from milk from which any of the fat originally contained therein has been removed," may be made and sold *only* when "such cheese is ten inches in diameter and nine inches in height." This law as to the exact size and shape for all skim cheese, supersedes earlier provisions in relation to branding cheese of this kind.

Makers of Wisconsin full-cream cheese often fail to conform to these provisions. Many packages of this cheese reach market without branding, aside from the simplest shipping mark. And when the official brand is used upon the box it is frequently omitted from the cheese.

There is much skimmed or partly skimmed cheese and filled cheese to be found in different parts of the country bearing misleading and false brands, like "Wisconsin Full-Cream," "Badger State Factory Full-Cream," etc, but the official State brand, with its registration number, has never yet been found actually counterfeited, although it is closely imitated.



(Two-thirds actual size.)

MINNESOTA.

Manufacturers of full cream cheese in the State of Minnesota are authorized to identify their products and protect them from imitation, by the use of an official and registered brand, "bearing a suitable device or motto and the words Minnesota State Full-Cream Cheese," under section 7 of chapter 247 of the General Laws of 1889, the provisions of which closely resemble those of the New York law.

The brand is to be used "upon the outside of the cheese and also upon the package containing the same." Every factory is to have a registered number.

The same law prohibits the manufacture and sale of imitation and adulterated cheese, the use of the official brand, upon any cheese other than full-cream, and the sale of falsely branded cheese; it also provides penalties for violations of the law. Further, it is declared that Minnesota State full-cream cheese shall be considered adulterated, unless two-fifths of its total solids shall be fat.

There is no provision under Minnesota laws which permits any branding of skim cheese made in that State.

Makers of Minnesota full-cream cheese do not as generally avail themselves of these provisions of law as they should do for their own interests and those of retail dealers and consumers. Many packages of this cheese reach market without branding aside from the simplest shipping mark. And when the official brand is used upon the box it is often omitted from the cheese.

There is a much skimmed or partly skimmed cheese and filled cheese to be found in different parts of the country, bearing misleading and false brands, but the official State brand of Minnesota with its registration number has never yet been found actually counterfeited or very closely imitated.

STATE OF MINNESOTA
No. 171
FULL CREAM CHEESE

(One-half actual size.)

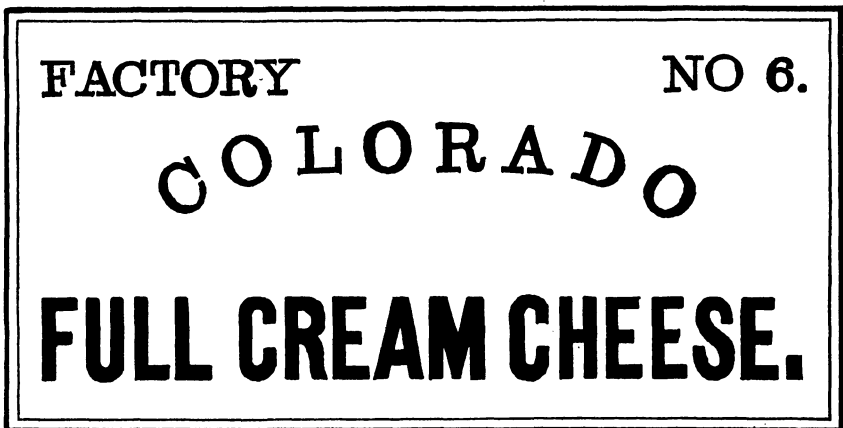
COLORADO.

Manufacturers of all cheese in the State of Colorado are required, by section 5 of act of the General Assembly, approved April 1, 1895, "to distinctly and durably stamp on the bandage of every such cheese, and on the box containing the same, in full-faced capital letters, the grade of the same, as 'Colorado full cream,' 'skim' or 'imitation' cheese. * * * Brands and stencils for stamping shall be procured of the State Dairy Commissioner."

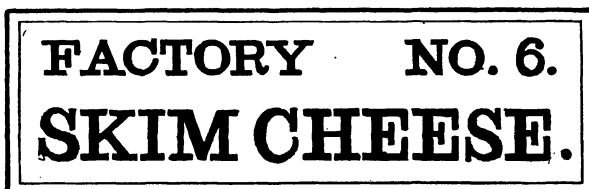
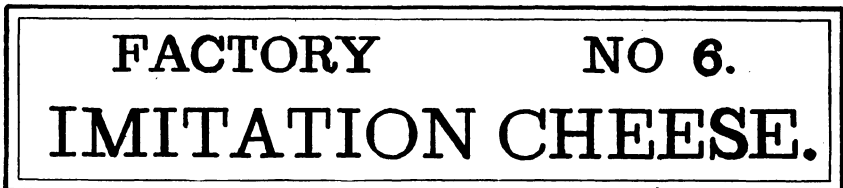
The next section of this act defines the different grades of cheese and provides that none shall be branded "full cream" unless it contains at least 35 per cent of butter fat, "in comparison with the total solids."

Each brand is numbered and recorded and penalties are prescribed for false branding and violations of the other provisions of the law.

Assuming that this law is well enforced under the supervision of the State Dairy Commissioner and that the official Colorado brands are not counterfeited (and there has been no report of such an act) it should be an easy matter to identify in the markets, by its marks, all "Colorado Full Cream Cheese."



(These three brands actual size.)



PROPOSED LEGISLATION BY CONGRESS REGARDING FILLED CHEESE.

Legislation is pending in the 54th Congress, to place the manufacture and sale of "filled cheese" under the surveillance and regulation of the U. S. Internal Revenue Bureau of the Treasury Department. The bill has at this date passed the House of Representatives by more than a two-thirds vote, and is now pending in the Senate. One section provides for distinctively marking this product as follows, so it may be easily identified, wherever sold:

SEC. 6. That filled cheese shall be packed by the manufacturers in wooden packages only, not before used for that purpose, and marked, stamped, and branded with the words "filled cheese" in black-faced letters not less than two inches in length, in a circle in the centre of the top and bottom of the cheese; and in black-faced letters of not less than two inches in length in line from the top to the bottom of the cheese, on the side in four places equidistant from each other; and the package containing such cheese shall be marked in the same manner, and in the same number of places, and in the same description of letters as above provided for the marking of the cheese; and all sales or consignments made by manufacturers of filled cheese to wholesale dealers in filled cheese or to exporters of filled cheese shall be in original stamped packages. Retail dealers in filled cheese shall sell only from original stamped packages, and shall pack the filled cheese when sold in suitable wooden or paper packages, which shall be marked and branded in accordance with rules and regulations to be prescribed by the Commissioner of Internal Revenue with the approval of the Secretary of the Treasury.

STATISTICS AND DATA AS TO CHEESE IN THE UNITED STATES.

Cheese production, according to the Census.

Producing years.	Pounds produced.
1849.....	105,535,893
1859.....	103,663,927
1869.....	162,927,382
1879.....	243,157,850
1889.....	256,761,883

Cheese production of farms and factories, compared.

Made on farms.	Made in factories.
1849....105,535,893 pounds.....
1869.... 53,492,153 pounds.....	109,435,229 pounds.
1889.... 18,726,818 pounds.....	238,035,065 pounds.

Exports of cheese from the United States for single years and yearly averages for five-year periods.

Periods.	Pounds.	Periods.	Pounds.
1850	10,361,189	1881-1885	118,813,685
1860	15,515,799	1886-1890	88,303,513
1861-1865	35,081,855	1891-1895	75,977,115
1866-1870	47,423,602	1893	81,350,923
1871-1875	90,688,546	1894	73,852,134
1876-1880	113,606,609	1895	60,448,421

NOTES UPON CHEESE.

Nine-tenths of the cheese produced in this country is made in the States of New York, Wisconsin, Ohio, Illinois, Vermont, Iowa, Pennsylvania, and Michigan, ranking in the order named. The New York product, alone, is almost one-half the total, and this State and Wisconsin together make over two-thirds of all.

It requires the milk of just about one million cows to make the cheese annually pressed in the United States.

The value of the annual cheese product of this country varies from \$20,000,000 to \$25,000,000.

About 9,000,000 pounds of cheese are imported annually into the United States.

The rate of consumption of cheese in America is about three pounds per capita per annum.

Consumption of cheese is apparently somewhat decreasing.

Good cheese is approximately composed of one-third water, one-third milk fat, and one-third casein, with some sugar and ash.